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Reply to Xavier S and colleague:

**“Hemospray use in upper
gastrointestinal bleeding from tumor –
is it the answer?”**

We appreciated the comments from Dr. Sofia Xavier and colleagues and read their case with great interest. This case is an elderly male patient who presented with acute recurrent tumor bleeding in the pre-pyloric area which was treated with adrenaline injection followed by bipolar coaptation 4 days prior to experiencing recurrent bleeding. Hemospray was applied to the blood clot on the lesion and hemostasis was achieved. The duration of hemostasis control was not described; however, we believed that it would be a temporary effect according to our previous experience [1].

We totally agree that Hemospray may be a promising first-line treatment for upper gastrointestinal bleeding from tumor because no other techniques have proven to be effective [1,2]. However, presence of blood on the lesion is required to activate Hemospray cohesion [3]. The initial endoscopic finding in the current case was Forrest IIa (non-bleeding visible vessel) ulcer in which there was no blood to trigger activation of Hemospray. Therefore, Hemospray might not have been suitable for their case initially.

According to either the American [4] or the recent European [5] guideline for management of upper gastrointestinal bleeding, a lesions suspicious for malignancy should be biopsied for pathologic diagnosis regardless of bleeding activity [4,5.] Hemospray may play an important role in that circumstance. Patients with suspected upper gastrointestinal bleeding from cancer may benefit from a biopsy and the temporary hemostasis that could be achieved with Hemospray.

Hemospray has several advantages in treatment of upper gastrointestinal bleeding from tumor. First, application of Hemospray is simple and it can be performed easily even in patients with anatomical distortion, as demonstrated in this case. Second, Hemospray did not cause further damage to the friable surface of the bleeding tumor and could also be beneficial even in the presence of thrombocytopenia or coagulopathy. Moreover, the Hemospray powder overlying the surface of the tumor could protect the vulnerable gastric tissue from acid and might provide additional time for tissue healing. In contrast, were a coaptation technic such as bipolar coaptation used, the heat from it could cause further necrosis to the tumor surface, resulting in recurrent bleeding [1]. Finally, Hemospray can applied as many times as needed in case of recurrent bleeding.

We would like to recommend using Hemospray as a bridging hemostasis technique when there is obvious blood on the lesion. Practically, it can be used as a first-

tier intervention as a bridging hemostatic technique for malignant upper gastrointestinal bleeding. However, it should be followed by further definitive hemostasis.

Competing interests: None

References

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